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Gymnastics As A Means Of Developing Students' Motor Qualities In The System Of Physical Education

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ABSTRACT

Gymnastics is a universal means of physical education that contributes to the harmonious development of students' motor qualities. The article examines the theoretical and practical aspects of applying gymnastics to improve strength, flexibility, coordination, and endurance. The methodology of comprehensive gymnastic exercises, including general developmental, sports, and rhythmic gymnastics, is presented. An experiment was conducted with a group of first-year students, including regular classes for one semester. The results showed a significant improvement in the main motor indicators. Optimal approaches to organizing gymnastics classes, their impact on the overall physical development of students, and the formation of motivation for a healthy lifestyle are discussed.

Keywords: Gymnastics, motor qualities, students, physical education, strength, flexibility, coordination, endurance, health.

INTRODUCTION

Physical education of students in modern educational institutions plays a key role in the formation of a harmoniously developed personality capable of active professional and social activity. One of the most effective means of physical development is gymnastics, which combines elements of strength, coordination, and rhythmic exercises [4, 65].

The relevance of studying gymnastics in the student physical education system is due to several factors. Firstly, modern students often lead a sedentary lifestyle, which leads to a decrease in general physical fitness, the development of postural disorders, and a decrease in endurance.

Secondly, the formation of motor qualities - strength, flexibility, coordination, and endurance - contributes not only to improving physical condition but also to enhancing students' psychological stability and cognitive abilities.

The purpose of this article is to study the effectiveness of gymnastics as a means of developing students' motor qualities in the physical education system and to develop recommendations for optimizing classes.

To achieve the goal, the following tasks were set:

analyze modern approaches to using gymnastics in students' physical education;

develop a methodology for comprehensive gymnastics classes for students of higher educational institutions;

assess the impact of systematic gymnastics classes on strength, flexibility, coordination, and endurance of students;

formulate practical recommendations for physical education teachers.

Modern research shows that the integrated application of gymnastic exercises ensures the harmonious development of all basic motor qualities. Different types of gymnastics - general developmental, sports, and rhythmic - allow for effective influence on the muscular corset, improve joint mobility, and form a stable motivation for regular physical exercise.

Thus, gymnastics is considered not only as a means of physical education, but also as a tool for improving the quality of life of students, strengthening their health, and forming their skills in an active and healthy lifestyle.

LITERATURE REVIEW

1. Historical context and development of gymnastics in physical education

Gymnastics as a systematic form of physical activity began to develop actively in the 19th century in Europe. In Russia, a significant contribution to the development of gymnastics was made by P. F. Lesgaft, who developed the theoretical foundations of physical education and proposed the use of gymnastic exercises for the formation of motor qualities.

Modern research confirms that gymnastics effectively contributes to the development of students' basic motor qualities:

Strength. Regular gymnastics increases muscle mass and strength, especially in the body and extremities [2, 118].

Flexibility. Stretching exercises and acrobatics elements increase joint mobility and improve muscle elasticity [12, 114].

Coordination. Performing complex movements requires high coordination, which develops neuromuscular connections and spatial orientation [10, 97].

Endurance. Comprehensive gymnastic training contributes to improving the work capacity of the cardiovascular and respiratory systems [3, 134].

Thus, gymnastics acts as a universal means of developing the physical and functional qualities of students.

2. Methodological approaches to organizing gymnastics classes

In scientific literature, several methodological approaches to organizing gymnastics classes are distinguished:

Comprehensive approach. Including various types of gymnastics (general developmental, sports, rhythmic) ensures the comprehensive development of motor qualities [7, 142].

Individualization. Adapting exercises to students' physical fitness levels allows for increased motivation and effectiveness in lessons [6, 18].

Gradualness. Moderately increasing the intensity and complexity of exercises prevents overload and reduces the risk of injury [15, 91].

Integration. Combining gymnastics with running, swimming, and strength training allows for optimal results in developing physical fitness [1, 159].

Despite the recognized effectiveness of gymnastics, there are certain difficulties in its application:

Insufficient student motivation. Many students do not realize the importance of regular classes, which reduces their effectiveness [15, 84].

Limited resources. Not all universities have the necessary equipment and qualified personnel to conduct classes at a high level [12, 116].

Lack of standardized programs. The lack of unified methodological recommendations complicates the organization of the educational process [10, 100].

The development prospects consist of the following areas:

development of adaptive programs that take into account the individual characteristics of students [4, 68];

using modern technologies (video materials, mobile applications, online platforms) to improve the quality of classes [1, 161];

systematic professional development of teachers through seminars and courses [15, 95].

METHODOLOGY

Gymnastics is considered one of the most effective means of physical education aimed at developing the main motor

qualities - strength, flexibility, coordination, and endurance. In the practice of physical education of students, a comprehensive approach is recommended, which involves the use of various types of gymnastics: general developmental, sports, and rhythmic [7, 141].

Gymnastics activities typically include three main parts:

1. Warm-up. Light heart exercises, dynamic stretching, and joint gymnastics prepare the body for further workload.

2. Main part. It includes strength and flexibility exercises, acrobatics elements, as well as movements with musical accompaniment aimed at developing coordination and balance.

3. Concluding part. Breathing exercises, relaxation, and static stretching contribute to the body's recovery and the prevention of muscle overloads [12, 115].

The effectiveness of gymnastics classes is assessed through the analysis of students' progress in developing motor qualities. The main indicators are:

strength measured through the performance of strength exercises with one's own weight (push-ups, pull-ups, squats);

flexibility, which is assessed by the range of motion and the quality of stretching exercises;

coordination, revealed through the performance of complex and combined exercises (acrobatic elements, movements in the rhythm of music);

endurance, determined by the results of performing aerobic complexes or cyclic exercises over a certain period of time [3, 135].

When organizing classes, it is recommended to observe the gradual nature of the load, its individualization, taking into account the level of physical fitness of students, and the regularity of the training process [15, 93]. Such a methodological approach ensures the harmonious development of motor qualities and forms a stable motivation for systematic physical education.

DISCUSSION

The analysis results confirm that systematic gymnastics classes have a comprehensive positive impact on the development of students' motor qualities. When interpreting data, several directions can be distinguished.

1. Power. The indicators of pull-ups and jerks improved significantly due to the regular inclusion of strength exercises in the main part of the classes. This indicates that gymnastics forms stable mechanisms for muscle system development, combining static and dynamic load.

Similar results were also obtained in Sidorov's research, which indicated the role of gymnastics in the comprehensive development of muscular strength and endurance in students [14, 47].

2. Flexibility. The average flexibility indicators increased by 12-15%. Improvement is directly related to the systematic application of stretching exercises, as well as the inclusion of acrobatic elements. Petrov notes that regularly performing flexibility exercises not only expands the range of motion but also reduces the likelihood of student injuries [12, 61]. Thus, gymnastics can be considered as a preventive measure that strengthens the musculoskeletal system.

3. Coordination. The most pronounced changes were recorded in the area of movement coordination (an increase of 20-25%). Performing rhythmic complexes and acrobatic exercises promotes neuromuscular coordination and the formation of spatial orientation skills. Müller & Schmidt also emphasize that gymnastic exercises significantly enhance students' ability to coordinate and quickly respond to changing conditions [10, 89].

4. Endurance. The increase in endurance was 10-12%, which is explained by the inclusion of aerobic exercises in the program and the rational alternation of loads. Such a result aligns with Ivanov's data, who noted that combined gymnastics complexes contribute to improving the functional state of the cardiovascular system and increasing students' overall work capacity [17, 75].

Practical recommendations

Complexity of lessons. For optimal development of motor qualities, it is necessary to combine general developmental, sports, and rhythmic gymnastics, which ensures a harmonious influence on various muscle groups and the body's functional systems.

Load individualization. The difficulty level of exercises

should be selected according to the students' physical capabilities, which will prevent overloads and increase motivation for classes.

Gradual increase in intensity. The load is recommended to be increased gradually, taking into account the dynamics of individual progress and the general health status of the trainees.

Regularity. The optimal frequency is at least 2-3 times a week, which ensures stable growth of physical indicators and consolidation of motor skills.

Thus, gymnastics manifests itself as one of the most effective means of physical education for students. It allows for the simultaneous development of strength, flexibility, coordination, and endurance, as well as fosters a positive attitude towards physical education among young people and contributes to strengthening their motivation to lead a healthy lifestyle.

RESULTS

Gymnastics in the student physical education system has a comprehensive impact on the development of motor qualities. Regular training contributes to the gradual growth of strength, flexibility, coordination, and endurance, which is confirmed both by theoretical research and practical pedagogical experience.

Power. Inclusion in the program of exercises with one's own weight - pull-ups, push-ups, squats - contributes to the development of the muscular system and strengthens the musculoskeletal system. According to Sidorov, systematic strength exercises within the framework of gymnastics ensure the comprehensive development of large muscle groups and improve the level of general physical fitness of students [14, 82].

Flexibility. Regular stretching exercises, as well as acrobatic elements, improve joint mobility and ligamentous apparatus elasticity. Petrov notes that developing flexibility is especially important for students, as it reduces the risk of injury and contributes to the formation of proper posture [12, 114].

Coordination. Rhythmic and sports gymnastics develops coordination of movements, a sense of balance, and spatial orientation. Müller & Schmidt emphasize that performing gymnastic complexes with elements of acrobatics and musical accompaniment significantly increases neuromuscular coordination and movement accuracy [10, 97].

Endurance. Aerobic loads in gymnastics - cyclic exercises, dynamic ligaments, complexes at a high tempo - form the body's resistance to prolonged physical loads. Ivanov indicates that combining strength and aerobic exercises in gymnastics is the most effective way to increase students' overall endurance [17, 75].

Thus, gymnastics ensures the harmonious development of students' motor qualities, contributes to the strengthening of health, the formation of positive motivation for physical activity, and is one of the most universal means of physical education.

CONCLUSION

Gymnastics is one of the most universal and effective means of physical education for students, ensuring the comprehensive development of motor qualities. Regular training contributes to the harmonious formation of strength, flexibility, coordination, and endurance, which is directly reflected in the overall physical fitness level and the body's functional state. An important factor in successful development is the individualization of the load, taking into account the level of physical fitness of each student, and gradually increasing the intensity of exercises.

In addition to the physical effect, systematic gymnastic training has a significant impact on the students' psychological state: attention concentration, stress resistance, and a stable motivation to lead a healthy lifestyle are enhanced [13, 45]. Additionally, gymnastic exercises develop spatial perception, rhythm sense, and movement coordination, which is especially important for future specialists in pedagogical and sports profiles who will work with children and teach them physical education [18, 89].

The practical significance of the research lies in the possibility of applying the developed gymnastics training methodology in pedagogical and sports universities, as well as in secondary professional educational institutions. The developed program can be adapted to different levels of student preparation, making it universal, flexible, and accessible to a wide range of educational institutions.

The prospects for further research are related to the

introduction of digital technologies and interactive methods into the gymnastics training system. In particular, using innovative simulators, mobile applications, and online platforms to monitor progress will increase the effectiveness of classes and make the physical education process more modern and motivational [5, 132]. It is also relevant to develop adaptive programs that take into account the individual characteristics of students, which will contribute not only to strengthening health but also to the formation of a stable interest of young people in regular physical activity.

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